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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Office of the Secretary Of Defense	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 6: RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0606100D8Z I <i>Budget and Program Assessments</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	26.580	3.863	3.992	5.768	0.000	5.768	4.029	4.110	4.177	4.251	Continuing	Continuing
101: <i>Budget and Program Assessments</i>	26.580	3.863	3.992	3.972	0.000	3.972	4.029	4.110	4.177	4.251	Continuing	Continuing
107: <i>Internet DMZ Migration</i>	-	0.000	0.000	1.796	-	1.796	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program supports the Office of the Director, Cost Assessment & Program Evaluation (CAPE). It funds assessments that help to resolve budget and programmatic issues across the full range of the Department's activities. Projects that support this effort help to inform the leadership on program alternatives, capability concept development, design and cost, as well as the appropriate balance of capabilities across the force, and also to identify how well the Department's expenditures are meeting its goals, and how well the force can implement the Defense strategy.

This program provides for analytical research across the entire spectrum of defense issues and concerns. The research agenda is focused on near to long-term problems identified by the Secretary of Defense, and addresses difficult and complex questions linked to program alternatives for current and future capabilities and forces in order to enhance the senior leadership's deliberations and decision-making.

This program provides the scientific and technical engineering services needed for research studies in the development of models and simulations and the evaluation of current analytical tools and scientific methods used to evaluate and assess weapons systems and warfighting capabilities for warfighting environments and scenarios, and related force structure. Deliverables from this program will include reports, briefings, and analyses designed to illuminate critical issues facing the Department. Outcomes include recommendations for new modeling techniques, programmatic alternatives, and scenario development.

In FY 2019 CAPE received increased funding from the DoD Joint Service Provider to support the migration, implementation, and sustainment of its DoD Non-Classified Internet Protocol Router Network Demilitarized Zone (DMZ) efforts. In addition to the one-year increased RDT&E funding in FY 2019 described in this exhibit, CAPE also received additional Procurement and Operation and Maintenance (O&M) funding throughout the FY 2019-2023 FYDP to support the migration and sustainment of these developmental solutions. CAPE's funds are included in the total Internet DMZ Migration amount transferred from JSP to OSD so that CAPE and three other affected OSD Principal Staff Assistants (PSAs) can execute their own long-term solutions outside of the JSP DMZ.

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<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0606100D8Z <i>I Budget and Program Assessments</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	4.014	3.992	4.009	-	4.009
Current President's Budget	3.863	3.992	5.768	-	5.768
Total Adjustments	-0.151	0.000	1.759	-	1.759
• Congressional General Reductions	-0.004	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.147	-			
• SBIR/STTR Transfer	-	-			
• Fiscal Guidance Adjustment	-	-	-0.005	-	-0.005
• Revised Inflation Guidance	0.000	0.000	-0.032	0.000	-0.032
• Internet DMZ Migration	0.000	0.000	1.796	0.000	1.796

**Change Summary Explanation**

FY 2017 total reflects final congressional enactment action. Outyear numbers reflect fiscal guidance and revised inflation guidance. The FY 2019 one-year funding increase reflects CAPE's share of a transfer from the DoD Joint Service Provider to various OSD Principal Staff Assistants in support of the migration, implementation, and sustainment of DoD Non-Classified Internet Protocol Router Network Demilitarized Zone (DMZ) efforts. In addition to the increased RDT&E funding described in this exhibit, CAPE also received additional Procurement and Operation and Maintenance (O&M) funding to support the migration and sustainment of these developmental efforts. These funds will enable CAPE to initiate the execution of its own long-term solutions outside of the JSP DMZ.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Office of the Secretary Of Defense										Date: February 2018		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0606100D8Z / Budget and Program Assessments				Project (Number/Name) 101 / Budget and Program Assessments			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
101: Budget and Program Assessments	26.580	3.863	3.992	3.972	0.000	3.972	4.029	4.110	4.177	4.251	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This program supports the Office of the Director, Cost Assessment & Program Evaluation (CAPE). It funds assessments that help to resolve budget and programmatic issues across the full range of the Department's activities. Projects that support this effort help to inform the leadership on program alternatives, capability concept development, design and cost, the appropriate balance of capabilities across the force, and also to identify how well the Department's expenditures are meeting its goals, and how well the force can implement the Defense strategy.

This program provides for analytical research across the entire spectrum of defense issues and concerns. The research agenda is focused on near to long-term problems identified by the Secretary of Defense, and addresses difficult and complex questions linked to program alternatives for current and future capabilities and forces in order to enhance DoD senior leadership's deliberations and decision-making.

This program provides the scientific and technical engineering services needed for research studies in the development of models and simulations and the evaluation of current analytical tools and scientific methods used to evaluate and assess weapons systems and warfighting capabilities for warfighting environments and scenarios, and related force structure. Deliverables from this program will include reports, briefings, and analyses designed to illuminate critical issues facing the Department. Outcomes include recommendations for new modeling techniques, programmatic alternatives, and scenario development.

## B. Accomplishments/Planned Programs (\$ in Millions)

	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<b>Title:</b> OSD Support for Programming Budget	3.863	3.992	3.972
<b>Description:</b> This program provides for analytical research across the entire spectrum of defense issues and concerns. The research agenda is focused on near to long-term problems identified by the Secretary of Defense, and addresses difficult and complex questions linked to program alternatives for current and future capabilities and forces in order to enhance senior leadership deliberations and decision-making.			
<b>FY 2018 Plans:</b> Studies, analyses, and assessments will be focused on: <ul style="list-style-type: none"> <li>- Improving cost analysis tools to inform program, budget, and Defense Acquisition Board reviews.</li> <li>- In support of the Weapon System Acquisition Reform Act (WSARA), independently assessing, analyzing, and where appropriate, updating cost indices, inflation rates, and escalation rates used in preparing the President's Budget for major acquisition programs.</li> </ul>			

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<b>Appropriation/Budget Activity</b> 0400 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0606100D8Z / <i>Budget and Program Assessments</i>	<b>Project (Number/Name)</b> 101 / <i>Budget and Program Assessments</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<ul style="list-style-type: none"> <li>- Developing, assessing, and enhancing databases that provide cost data for major weapon systems.</li> <li>- Improving estimates produced by the Defense Employment and Purchases Projection System (DEPPS) and Defense Translator, which are used to support decision briefs to the President, Congress, Secretary of Defense, and Deputy Secretary of Defense.</li> <li>- Modeling and analyzing aircraft survivability against various threat detection approaches and in various operational environments. Assessing the ability of aircraft and weapons to operation in anti-access/area denial regions.</li> <li>- Modeling logistical vulnerabilities against various threats and in various operational environments. Assessing the cost and mission effectiveness of proposed improvements.</li> <li>- Modifying and supporting a wargaming repository.</li> <li>- Analyzing OCO funding data to determine how funding was actually spent as distinguished from DoD base budget resources.</li> </ul> <p>Provide normalization information that can be applied to existing Defense Resources Data Warehouse (DRDW) data for the current budget position.</p> <p><b>FY 2019 Plans:</b> Studies, analyses, and assessments will be focused on:</p> <ul style="list-style-type: none"> <li>- Improving cost analysis tools to inform program, budget, and Defense Acquisition Board reviews.</li> <li>- In support of the Weapon System Acquisition Reform Act (WSARA), independently assessing, analyzing, and where appropriate, updating cost indices, inflation rates, and escalation rates used in preparing the President's Budget for major acquisition programs.</li> <li>- Developing, assessing, and enhancing databases that provide cost data for major weapon systems.</li> <li>- Improving estimates produced by the Defense Employment and Purchases Projection System (DEPPS) and Defense Translator, which are used to support decision briefs to the President, Congress, Secretary of Defense, and Deputy Secretary of Defense.</li> <li>- Modeling and analyzing aircraft survivability against various threat detection approaches and in various operational environments. Assessing the ability of aircraft and weapons to operation in anti-access/area denial regions.</li> <li>- Modeling logistical vulnerabilities against various threats and in various operational environments. Assessing the cost and mission effectiveness of proposed improvements.</li> <li>- Modifying and supporting a wargaming repository.</li> <li>- Analyzing OCO funding data to determine how funding was actually spent as distinguished from DoD base budget resources.</li> </ul> <p>Provide normalization information that can be applied to existing Defense Resources Data Warehouse (DRDW) data for the current budget position.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> FY 2019 funding levels are virtually steady-state and will fund a mix of research activities to carry out the plans stated above.</p>				
<b>Accomplishments/Planned Programs Subtotals</b>		3.863	3.992	3.972

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<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> A mix of competitive contracts with commercial firms and research provided by university-affiliated research centers (UARCs), and Federally Funded Research and Development Centers (FFRDCs).		
<b>E. Performance Metrics</b> The products or expected outcomes of this program are studies and analyses to support resource allocation decisions, major defense acquisition decisions, and issues of high interest to the Secretary of Defense. Performance is measured by the quality of the analyses and is monitored through the review of the organizational assessment process. The primary goal is to ensure that study and analytical products are timely, clear, complete, accurate, responsive, balanced, and objective.		

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<b>Appropriation/Budget Activity</b> 0400 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0606100D8Z / Budget and Program Assessments				<b>Project (Number/Name)</b> 107 / Internet DMZ Migration			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
107: Internet DMZ Migration	-	0.000	0.000	1.796	-	1.796	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Internet DMZ Migration reflects CAPE activities as part of a broader DoD effort to provide additional funds to Office of the Secretary of Defense (OSD) Principal Staff Assistants to enable them to migrate, implement, and sustain their DoD Non-classified Internet Protocol Router Network Demilitarized Zones (DMZ) efforts. CAPE's RDT&E funds will support initial cloud development and conversion costs.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
<p><b>Title:</b> Internet DMZ Migration</p> <p><b>Description:</b> In FY 2019 CAPE received increased funding from the DoD Joint Service Provider to support the migration, implementation, and sustainment of its DoD Non-Classified Internet Protocol Router Network Demilitarized Zone (DMZ) efforts. In addition to the increased RDT&amp;E funding described in this exhibit, CAPE also received additional Procurement and Operation and Maintenance (O&amp;M) funding to support the migration and sustainment of these developmental efforts. CAPE's funds are included in the total Internet DMZ Migration amount transferred from JSP to OSD so that CAPE and three other affected OSD Principal Staff Assistants (PSAs) can execute their own long-term solutions outside of the JSP DMZ.</p> <p><b>FY 2018 Plans:</b> New one-year project in FY 2019</p> <p><b>FY 2019 Plans:</b> Initial cloud development and conversion.</p> <p><b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> Increase from FY 2018 to FY 2019 is due entirely to the nature of the project. This is a new FY 2019 initiative that provides O&amp;M, Procurement, and RDT&amp;E funding. The RDT&amp;E funding is for FY 2019 only in support of initial cloud development and database conversion activities. There was no prior-year funding and there is no outyear funding in the FY 2019 President's Budget.</p>	0.000	0.000	1.796
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.000	1.796

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

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<b><u>D. Acquisition Strategy</u></b> A mix of competitive contracts with commercial firms and research provided by university-affiliated research centers (UARCs), and Federally Funded Research and Development Centers (FFRDCs).		
<b><u>E. Performance Metrics</u></b> The products or expected outcomes of this program are studies and analyses to support an Internet DMZ Migration implementation plan that explores and evaluates cloud computing strategies and addresses data conversion issues. Performance is measured by the quality of the analyses and is monitored through the review of the organizational assessment process. The primary goal is to ensure that study and analytical products are timely, clear, complete, accurate, responsive, balanced, and objective.		